

AMENDMENTS TO THE CLAIMS:

JC17 Rec'd PCT/PTO 09 JUN 2005

Replace the claims with the following rewritten listing:

1. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device to a hearing impaired user, comprising:
 determining a perceptual reference level (PRL) of a first stimuli signal (FSS) in a reference frequency band (RFB) by presenting said first stimuli signal (FSS) to said hearing impaired user, and obtaining perceptual judgements of a loudness of said first stimuli signal (FSS) from said hearing impaired user, and
 determining said perceptual reference level (PRL) of a second stimuli signal (SSS) in a further frequency band (FFB) by presenting said second stimuli signal (SSS) to said hearing impaired user, and requesting said hearing impaired user to compare a loudness of said second stimuli signal (SSS) with said loudness of said first stimuli signal (FSS).
2. (Original) A method of adapting signal processing characteristics of a portable communication device according to claim 1, wherein said portable communication device is a hearing aid.
3. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to claim 1 or claim 2, wherein said portable communication device comprises compensation means for compensation of hearing loss.
4. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to any of the claims 1 to 3, wherein a most comfortable level (MCL) is used for said perceptual reference level (PRL).
5. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to any of the claims 1 to 4, wherein an uncomfortable level (UCL) is used for said perceptual reference level (PRL).

6. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 5~~, wherein said first stimuli signal (FSS) comprises periodic signals and / or frequency band limited noise.

7. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 6~~, wherein said first stimuli signal (FSS) comprises a sound.

8. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 7~~, wherein said first stimuli signal (FSS) comprises a sequence of sounds.

9. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 8~~, wherein said sound is a test word.

10. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 9~~, wherein said test word has a spectral energy content of which an effective part is within said reference frequency band (RFB).

11. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 10~~, wherein said test word is chosen according to the everyday word usage of said hearing impaired user.

12. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 11~~, wherein said reference frequency band (RFB) is a sub-band of the an audible frequency band.

13. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 12~~, wherein said reference frequency band (RFB) is a sub-band of the a frequency band from 100 Hz to 10 kHz.

14. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 13~~, wherein said reference frequency band (RFB) has a width of 1,5 octave.

15. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 14~~, wherein said reference frequency band (RFB) has a width of one octave.

16. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 15~~, wherein said reference frequency band (RFB) has a width of 2/3 octave.

17. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 16~~, wherein said reference frequency band (RFB) has a width of 1/3 octave.

18. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 17~~, wherein said reference frequency band (RFB) is ~~the~~ a band from 500 Hz to 1 kHz.

19. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 18~~, wherein said reference frequency band (RFB) is ~~the~~ a band from 250 Hz to 800 Hz.

20. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 19~~, wherein said obtaining perceptual judgements of a loudness of said first stimuli signal (FSS) from said hearing impaired user, comprises ~~the step of~~ letting the user vary ~~the~~ a sound pressure level (SPL) of the first stimuli signal (FSS) until said perceptual reference level (PRL) is achieved.

21. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 20~~, wherein said second stimuli signal (SSS) comprises periodic signals and / or frequency band limited noise.

22. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 21~~, wherein said second stimuli signal (SSS) comprises a sound.

23. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 22~~, wherein said second stimuli signal (SSS) comprises a sequence of sounds.

24. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 23~~, wherein said sound of said second stimuli signal (SSS) is a test word.

25. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 24~~, wherein said test word of said second stimuli signal (SSS) has a spectral energy content of which an effective part is within said further frequency band (FFB).

26. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 25~~24, wherein said test word of said second stimuli signal (SSS) is chosen according to ~~the everyday word usage~~ of said hearing impaired user.

27. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 26~~, wherein said second stimuli signal (SSS) is of a kind similar to said first stimuli signal (FSS).

28. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 27~~, wherein said further frequency band (FFB) is a sub-band of ~~the~~an audible frequency band.

29. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 28~~, wherein said further frequency band (FFB) is a sub-band of ~~the~~a frequency band from 100 Hz to 10 kHz.

30. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 29~~, wherein said further frequency band (FFB) is different from said reference frequency band (RFB).

31. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 30~~, wherein said step of determining said perceptual reference level (PRL) of a second stimuli signal (SSS) in a further frequency band (FFB) by presenting said second stimuli signal (SSS) to said hearing impaired user, and requesting said hearing impaired user to compare a loudness of said second stimuli signal (SSS) with said loudness of said first stimuli signal (FSS), is repeated with several substantial mutually exclusive said further frequency bands.

32. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 31~~, wherein said further frequency band (FFB) has a width of 1,5 octave.

33. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 32~~, wherein said further frequency band (FFB) has a width of one octave.

34. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 33~~, wherein said further frequency band (FFB) has a width of 2/3 octave.

35. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 34~~, wherein said further frequency band (FFB) has a width of 1/3 octave.

36. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 35~~, wherein said further frequency band (FFB) is ~~the~~ a band from 100 Hz to 500 Hz.

37. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 36~~, wherein said further frequency band (FFB) is ~~the~~ a band from 250 Hz to 500 Hz.

38. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 37~~, wherein said further frequency band (FFB) is ~~the~~ a band from 1 kHz to 2 kHz.

39. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 38~~, wherein said further frequency band (FFB) is ~~the~~ a band from 2 kHz to 4 kHz.

40. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 1 to 39~~, wherein said comparing a loudness of said second stimuli signal (SSS) with said loudness of said first stimuli signal (FSS), is performed to establish equal loudness.

41. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device to a hearing impaired user, comprising: ~~the steps of~~
 evaluating a hearing impairment of said hearing impaired user by presenting at least one stimuli signal (SS) to said hearing impaired user, and obtaining perceptual judgements of a

predetermined attribute of said at least one stimuli signal (SS) from said hearing impaired user, and

□adjusting said signal processing parameters of said portable communication device according to said perceptual judgements of said at least one stimuli signal (SS);

whereby in said at least one stimuli signal (SS) comprises a set of test words, said test words each having a spectral energy content of which thean effective part is within one restricted frequency band selected from a set of restricted frequency bands.

42. (Original) A method of adapting signal processing characteristics of a portable communication device according to claim 41, wherein said portable communication device is a hearing aid.

43. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to claim 41-~~or 42~~, wherein said portable communication device comprises compensation means for compensation of hearing loss.

44. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 41 to 43~~, wherein said test word is chosen according to ~~the~~ everyday word usage of said hearing impaired user.

45. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 41 to 44~~, wherein said restricted frequency band is a sub-band of the audible frequency band.

46. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 41 to 45~~, wherein said restricted frequency band has a width of 1,5 octave.

47. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 41 to 46~~, wherein said restricted frequency band has a width of one octave.

48. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 41 to 47~~, wherein said restricted frequency band has a width of 2/3 octave.

49. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 41 to 48~~, wherein said restricted frequency band has a width of 1/3 octave.

50. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 41 to 49~~, wherein said restricted frequency band is the band from 500 Hz to 1 kHz.

51. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 41 to 50~~, wherein said restricted frequency band is the band from 250 Hz to 800 Hz.

52. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 41 to 51~~, wherein said restricted frequency band is the band from 100 Hz to 500 Hz.

53. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 41 to 52~~, wherein said restricted frequency band is the band from 250 Hz to 500 Hz.

54. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 41 to 53~~, wherein said restricted frequency band is the band from 1 kHz to 2 kHz.

55. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 41 to 54~~, wherein said restricted frequency band is ~~the~~ a band from 2 kHz to 4 kHz.

56. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 41 to 55~~, wherein said obtaining perceptual judgements of a predetermined attribute of said at least one stimuli signal (SS) from said hearing impaired user, comprises ~~the step of~~ letting said user vary said predetermined attribute until a predetermined perceptual level is achieved.

57. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 41 to 56~~, wherein said step of evaluating a hearing impairment of said hearing impaired user by presenting at least one stimuli signal (SS) to said hearing impaired user, and obtaining perceptual judgements of a predetermined attribute of said at least one stimuli signal (SS) from said hearing impaired user,

is repeated with several substantial mutually exclusive said restricted frequency bands.

58. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 41 to 57~~, wherein said hearing impaired user is presented with at least two stimuli signals (SS).

59. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 41 to 58~~, wherein said predetermined attribute is a perceptual hearing level.

60. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 41 to 59~~, wherein said predetermined attribute is consonant discrimination.

61. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 41 to 60~~, wherein said predetermined attribute is intelligibility.

62. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 41 to 61~~, wherein said predetermined attribute is clarity.

63. (Currently Amended) A method of adapting signal processing characteristics of a portable communication device according to ~~any of the claims 41 to 62~~, wherein said obtaining perceptual judgements of a predetermined attribute of said at least one stimuli signal (SS) from said hearing impaired user, is repeated with a further predetermined attribute.